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PERRIN AND LUCETTE;

OR,

HONESTY REWARDED.

CHAPTER I.

Perrin was born in a village near Vitré in Brittany of poor parents, whom having lost in his earliest childhood, he had depended on public charity for his support, and had been taught reading and writing, but his education had extended no farther. At the age of fifteen, he entered the service of a small farmer, who employed him to look after his flocks. Lucette, the daughter of another farmer, had the care of those belonging to her father, in the same neighbourhood. Whilst driving them out to pasture, she frequently saw Perrin, who rendered her all the little services proportionate to their age and situation. The habit of seeing one another, the similarity of their occupations, and their mutual kind offices towards each other, after some time caused a virtuous attachment between them. Perrin proposed to Lucette to demand her in marriage of her father. She gave her consent, but declined being present when he made his proposals. Lucette was going to the town on the morrow, and she begged of Perrin to take that opportunity, and to return in the evening to meet her, and to let her know how he had been received. The young man, at the time appointed, flew to the father's house, and declared to him, in the most open manner, his attachment to his daughter, and his intention of marrying her. "Ah," replied the old man roughly, interrupting him, "so you are in love with my daughter, are you, and you mean to marry her? why, Perrin, what are you thinking of? what do you mean to do? Have you a home provided for her? in a word, how are you to support her? You know you are only a labourer, you have no money; Lucette is not rich enough to support you and herself too. No, no, Perrin, that is not the way to think of getting married." "But I am strong and healthy," he replied, "and I shall not want employment whilst I am willing to work, and what exertions would I not make to maintain your daughter. Even now I can earn one hundred crowns a-year, out of them I have been able to save twenty, so I can defray the expense of the wedding; I shall exert myself more my savings will increase, then I shall be able to rent a little farm; the richest inhabitants of our village have begun like me, why may not I succeed as well as they?" "That's all very well," answered the old farmer; "you are quite young enough yet, you can wait awhile, you have only to become rich, and then you shall have my daughter, but for the present let me hear no more about it." Perrin could obtain no other answer. He hastened to meet Lucette according to his promise. He looked sorrowful; she could read in his countenance the news he had brought her. "My father, then, has given you a refusal," said she. "Ah! Lucette," he replied, "I am indeed unfortunate to have been born so poor, but I have not lost all hope, my situation may change; as your husband, I would have spared nothing to procure you a comfortable maintenance, do you think I shall do less to become such?" "Never mind, we shall be united yet; keep your heart for me alone, remember you have given it me."

The conversation had so engrossed their attention, that they scarcely perceived that the night was advancing, and that they had not yet quitted the high-road. They immediately quickened their pace to regain their respective dwellings, when Perrin struck his foot against something and stumbled. In raising himself, he groped about with his hands to endeavour to discover the cause of his fall, when, to his surprise, he found it was a bag rather heavy. Curious to know what it contained, they repaired to a field just by, where some labourers had left the roots of trees burning, which they had cut down to clear the ground. At opening the bag, they discovered by this light that it was full of gold. "What do I see?" cried Lucette; "Ah! Perrin, so you have become rich." "Yes, Lucette," he replied, "I shall possess you; Heaven, favourable to our wishes, has sent wherewith to satisfy your father, and make us happy." This idea filled their hearts with joy, they eagerly contemplated the treasure, then having looked at each other with tenderness, they proceeded immediately to show it to the old man. They had nearly reached the house, when Perrin suddenly stopped. "We are expecting to be made happy by means of this gold," said he to Lucette; "but does it belong to us? no doubt it belongs to some merchant who has lost it in returning home from the fair at Vitré, which is just over, and at this very time while we are rejoicing, he perhaps is in the most frightful despair." "Ah! Perrin,

your reflection is indeed most serious, such may be the case of the unfortunate man, and how can we enjoy what belongs to him? Accident has thrown it in our way, but to keep it would be a theft." "You make me tremble," said Perrin; "we were going to carry it to your father; we should have obtained our wishes, but how could we be happy at another's expense? I tell you what we will do, let us go at once to our good rector, (such is the name given to the parish priest in that part of France.) He has always treated me with the greatest kindness; it was he that got me this situation, and I ought to do nothing without consulting him, we will make him our confident in everything."

The rector was at home. Perrin placed the bag of gold which he had found in his hands, and acknowledged that he had at first regarded it as a present from heaven; he did not conceal from him his attachment to Lucette, and the obstacle which his poverty was to their union. The good pastor listened to him with the kindest attention; he looked first at one, and then at the other. Their story quite affected him, he perceived all the ardour of their affection, and admired that uprightness and integrity which were still superior to it. He applauded their conduct. "Perrin," said he, "preserve always the same sentiments, Heaven will bless you; we shall find the master of this gold, and he will reward your honesty; I will join to it some of my little savings, and you shall gain the hand of Lucette. I take upon myself to obtain her father's consent, you are deserving of each other. If this money be never claimed, it is the property of the poor; you are poor, and in that case, I shall believe myself justified in returning it to you, since Divine Providence seems already to have disposed of it in your favour.

The young people withdrew, satisfied with having done their duty, and cheered up with the pleasing hopes that had been given them. The rector caused the bag of money to be cried throughout his parish, he afterwards had it posted up at Vitré, and in all the surrounding villages. Many persons prompted by avarice, pretended to claim the lost treasure; but none of them could describe either the sum of money, the species of coin, or the bag which contained them. During this time, the good rector did not forget that he had promised Perrin to interest himself for his happiness. He helped him to take a little farm, stocked it with cattle, supplied it with implements of husbandry, and two months afterwards, married him to Lucette.

The happy couple returned thanks to the Almighty and to their Pastor, who had been under Him instrumental to their felicity. Perrin was industrious, Lucette employed herself in household affairs, they were exact in paying their rent, lived moderately on the surplus, and felt contented and happy.

It was now two years and the lost gold had not been claimed, the Rector therefore did not judge it necessary to wait any longer, but carried it to the virtuous couple whom he had united. "My children," said he to them, "enjoy this blessing which Providence has sent you, and do not abuse it; these twelve thousand livres are actually without a claimant, you can make use of them; if by chance you should ever discover the owner, you ought, undoubtedly, to restore them to him; you can employ them in such a manner as will only change the nature of the property without diminishing its value." Perrin followed his advice, he thought he could not do better with it than to make a purchase of the farm which he rented, as it was to be disposed of. It was valued at rather more than twelve thousand livers, nevertheless, he had every reason to believe his offer would be accepted, by being paid down in ready money; for as he regarded himself only as the steward, he considered that he could not lay out the money to better advantage, should it ever be required again at his hands. The Rector approved of this proposition, the bargain was soon struck, and the farmer, now turned landlord, endeavoured by his exertions to render the property still more valuable. Heaven blessed him with success, and he attained to those easy circumstances which it had always been his ambition to procure for Lucette. Two children blessed their happy union, and they took a pleasure in seeing themselves, as it were, live again in these tender pledges of their love. When Perrin was returning home from the fields, Lucette would bring the children out to meet him, he would catch them up in his arms and kiss them; one would begin to wipe the perspiration off his face, the other would try to help him to carry his pickaxe, and whilst he smiled at his feeble efforts, he could not refrain from returning thanks to God who had blessed him with such an affectionate spouse, and children who so much resembled her.

Some years after the good old Rector died. Perrin and Lucette bewailed their loss, and remembered with the most tender gratitude that their worthy Pastor had been both a spiritual and temporal father to them, but at the same time, this event led them to reflect on their own mortality. "We also shall die," said they one to the other, "and this farm will come into the hands of our children; nevertheless, it does not belong to us, and should the rightful owner ever come to claim it, he would in that case, be deprived of it for ever, and we should descend into the grave with the goods of our neighbour on our consciences." They could not bear this thought, they even had a declaration written out in due form, which they got signed by the principal inhabitants of the village, by which they gave up the property should the just claimant ever appear. This precaution, which they judged necessary to compel their children to make restitution, tranquillized their minds, and all things went on to their entire satisfaction.

CHAPTER II.

Ten years had now elapsed since Perrin had become proprietor of the farm which he occupied, when one day as he was returning to dinner, after a

laborious morning's work, his attention was arrested by the overturning of a carriage with two travellers in it on the high road at a very short distance from where he stood. He ran immediately to the spot to render all the assistance he was able, and offered them the horses out of his plough to carry their luggage. He begged of the travellers, who were not hurt, that they would come and rest themselves at his house, and take some refreshment after their accident. "Truly," cried one of them, as he brushed the dust off his clothes, "this is an unlucky part of the country to me, it seems I am never to pass this way without meeting with some misfortune. About twelve years ago I met with a considerable loss somewhere hereabouts. I was returning from the fair at Vitré, and lost a bag, containing no less than twelve thousand livers in gold."—"But how was it," said Perrin, who was all attention at hearing this, "that you did not make some search after so great a sum?"—"My worthy friend," replied the traveller, "that was, I may say, impossible; I had to make all speed to Lorient, from whence I was to embark for the Indies. There was no time to be lost, the vessel was ready to set sail, and you know it would not have waited for me; I had no opportunity of making any inquiries, which would most likely have proved useless, and by preventing my departure, would have exposed me to a much greater loss than that which I had sustained." At hearing this the heart of the honest farmer leaped for joy, he pressed the travellers with greater eagerness to accept of his offer, his house was the nearest and best in the village. They could no longer refuse to accompany him. He went before to show them the way, and meeting his wife, who was coming out as usual, he desired her to return and prepare dinner for his guests. While it was getting ready, he presented them with some refreshments, and turned the conversation on the subject of the loss, which one of them had complained of, since he had no doubt but he was the man to whom restitution was due. He then went to the new Rector, to inform him of what he had heard, and to invite him to come and dine with them. He accompanied him back to his house, and could not cease admiring the joy which the good farmer expressed at a discovery that might prove the ruin of him.

After dinner the travellers knew not how to express their gratitude for the kind reception Perrin had given them. They admired the domestic economy of this little family, the goodness of his heart, his candour, the easy agreeableness and activity of Lucette. They caressed the children. Perrin then showed them the house, the garden, his sheep and cattle; he entertained them with an account of his fields and their produce, then pausing for a few moments, he turned towards the first traveller, and said to him, "Sir, all that you have seen to-day belongs to you; when the money that you lost fell into my hands, seeing that it remained unclaimed I bought this farm with it, intending to give it to the right owner, should he ever make his appearance, therefore, the farm and all belonging to it is yours; and had I have died before finding you out, our Rector here holds in his hand a written document, by which I have made it over to you as your property." The stranger, after reading it, looked first at Perrin, then at Lucette and the children. At last, recovering a little from his astonishment, he exclaimed, "Where am I, and what have I just heard? what a proceeding! what noble, what disinterested virtue! and in what condition of society have I met with it!" Then addressing himself to Perrin, "Have you any other dependance besides this farm?" said he. "No, not any; but if you do not dispose of it you will want a farmer, and I hope in that case you will give me the preference."—"Your honesty merits a far different reward," replied the stranger. "It is now twelve years ago since I lost the sum of money which you found; since that time God has blessed me with prosperity; my commercial connexions became very extensive, and I did not long perceive the effects of my loss; restitution now would add comparatively nothing to my wealth, you are deserving of this little fortune; Divine Providence has made you a present of it, and it would be offending Him to take it away from you. I give it up entirely into your hands; you may keep it, I renounce all claim to it—what other man would have acted as you have done?" So saying, he tore to pieces the deed which he held in his hand. "But," continued he, "so beautiful an action must not be consigned to oblivion. No new act is necessary to confirm my having made it over to you and your children; nevertheless, I will have the whole transaction committed to writing, to perpetuate the remembrance of your honesty and uprightness." A notary was accordingly sent for. Perrin and Lucette fell at the feet of the traveller, he raised them up and embraced them. Perrin shed tears of tenderness and joy. "My children," cried he, "come forward and kiss the hand of your benefactor: my dear Lucette, this property now belongs to us, and henceforward we may enjoy it and leave it to our children without either trouble or remorse."

I. L. Jun.

Nicetas, in his annals, gives us the history of a certain emperor, who being come to his last hour, convoked the princes of the empire, and thus addressed them: "You see here before you my two sons, they are both virtuous youths: nevertheless I consider the youngest the most fitted to govern this empire; since besides his other virtues he is inclined to docility and a merciful disposition, and if ever he falls into defects, he is ready to own himself in the wrong, and to follow the good advice of others, and the dictates of reason. Whereas, the other is given to anger, and in the heat of the moment is unable to contain himself. And there is nothing more destructive than this of the qualities of a good governor or more contrary to sound wisdom."

I have turned my eyes in every direction, and have attentively considered every method of governing and directing religious houses. Moreover, I have made these several methods the subject of trial; and, after all, I find the best is that which is the most amiable, humble, frank and open, and tolerant.—ST. JANE FRANCES DE CHANTAL.

THE PSALMODY AND CHANTING OF THE ANGLO-SAXONS.

Among the Anglo-Saxons, both at the celebration of the sacrifice, and during the canonical hours, the whole service, with the exception of certain prayers during the mass, was chanted by the choir. St. Paul had advised his disciples to sing in their hearts to God in psalms and hymns and spiritual canticles; and we know that the primitive Christians in their religious assemblies carefully practised what he had so strongly recommended. But centuries passed before the improvement was introduced of dividing the singers into two choirs, who should alternately answer each other. The first essay among the Greeks was made at Antioch, about the year 350; the first among the Latins by St. Ambrose, at Milan, in 386; but the merit of the innovation was universally admitted, and the practice of alternate chant spread in a few years to almost every Christian people. Whether it reached Britain is uncertain; for of the British chant we know nothing but from a passage in Gildas, who praises its sweetness and melody; that it was not adopted in Ireland appears from the claim of St. Wilfrid to the merit of introducing it among the monasteries founded in the north by the Scottish missionaries. In ancient churches, the ecclesiastical music would, of course, be modified by the national taste; but in missionary churches "the daughter would speak the language of the mother," and the service would be chanted as it was chanted where the teachers had been educated. Among the Anglo-Saxons, as the first teachers were Romans, the Roman chant, which had been reformed and improved by Pope Gregory, was introduced; and in proportion as the knowledge of the gospel was propagated, pupils from the recently converted churches resorted to the school of ecclesiastical music which had been opened at Canterbury. Some years later, Bennet Biscop obtained from Pope Agatho the services of John, abbot of Saint Martin's, and arch-cantor of St. Peter's. John accompanied the Anglo-Saxon to England, resided for twelve months in his monastery at Wearmouth, and gave lessons in the chant, not only to the monks of that abbey, but to deputies from most of the churches in Northumbria. Subsequently, schools were everywhere established; both clergy and monks strove to distinguish themselves by the excellence of their choirs; and of the importance attached to such excellence we may judge from the fact, that in many instances we find the office of head teacher actually discharged by the bishop or the abbot himself.

It may, perhaps, be thought that the daily recurrence of the choral service at the seven hours of prayer, would be felt by the monks and clergy as a grievous and insupportable burthen. It certainly occupied a considerable portion of their lives; but to men, animated with the true spirit of their profession, it proved, if we may credit their own statements, the chief charm of their existence. It was a heavenly employment. It assimilated them to the angels, who are described in holy writ as constantly singing the praises of the Creator. They believed that these blessed spirits descended invisibly from above to join with their brethren upon earth in songs of adoration and praise. Hence they would suffer no consideration, no pretence of business or of study, to withdraw them from the performance of this duty. When they travelled, whether it was by sea or land, they chanted the daily service. If indisposition confined them to their cells, some of their brethren were ready to sing or read the "offices" with them or for them. For several months Bennet Biscop was too weak to move from his bed; yet he never allowed a canonical hour to pass, either in the day or night, without sending for some of his monks, who, divided into two choirs, chanted at his bedside the appropriate service.

Neither was psalmody confined to the choral duty. It offered the most approved form of private devotion; and that for two reasons:—1, the psalter was of inspired origin, and therefore more perfect in itself, and more acceptable to God, than any prayer of human invention: 2, it had moreover been committed to memory by every monk or clergyman at his initiation in his profession, and was therefore always at hand, even when the eye-sight failed, or written forms were not to be procured. Hence 1. It was made to serve all the purposes of a miscellaneous prayer-book; and selections were formed of passages from it expressive of praise and adoration, or of joy and gratitude, or of fear of God's judgments and of hope in his mercies, or of the many other devotional feelings which may arise in the mind of man during his communings with his Creator. Beda composed a psalter consisting solely of verses that were obvious in meaning, or general in application, or indicative of some great truth, or calculated to excite and nourish certain pious affections. Alcuin followed a different method. He collected entire psalms of a similar tendency in eight separate fasciculi, prefixed to each fasciculus a title explanatory of its object, and thus supplied individuals with forms of supplication applicable to their respective circumstances. 2. Men were often solicited to pray for their parents and relatives, their friends and benefactors. For this purpose they were accustomed to chant a longer or shorter portion of the psalter, and at the conclusion to fall on their knees, and to say in Latin or English, if he, for whom they prayed, was still living, "O Lord, have mercy upon him: spare his sins, and convert him, that he may do thy holy will:" or, if he was already dead, "according to thy great mercy, O Lord, give rest unto his soul, and out of thy boundless goodness grant to him the enjoymont of eternal light in the company of thy saints." 3. This practice of private psalmody was in high estimation among the aged and infirm, especially among those whose sight was impaired; for in those days, when the aids which we derive from the skill of the optician were unknown, the failure of eye-sight with men of letters crept on at a much earlier period than it does at present. Psalmody was generally found to offer relief from the tedium of gloom and loneliness, and to cheer the spirits in the hours of pain and languor. It was the daily and favourite exercise of Beda and Alcuin; of Beda during the illness which preceded his death, of Alcuin for years, during which the weakness of his eyes prevented him from reading or writing. To both it proved a source of cheerful employment, tranquillizing to the mind, and incentive to devotion.—*Dr. Lingard's History and Antiquities of the Anglo-Saxon Church.*

To see a well-regulated family acting as if they were one body informed by one soul; to see those who are embarked together in one bottom, whose interests are inseparably united, and, therefore, whose hearts ought to be so too, acting in concert, adopting each other's cares, and making them their own, uniting their friendly beams, and jointly promoting the common happiness, is a beautiful scene, and amiable even in the sight of that Being who maketh *men to be of one mind in a house.* To have those who will receive us with an open-hearted cheerfulness, to whom we can discharge the fulness of the soul, to whom we can unburden our cares; and by unburdening we lessen them; (for sorrow, like a stream, grows weaker, by being divided into several channels:) to have those, with whom we can share our joys; (and joy, like light, by communicating grows greater, and burns brighter;) this is a happiness, which a forlorn individual must be in a great measure a stranger to, who stands single in life, without any support to lean upon.

LECTURE ON THE INSALUBRITY OF TOWNS.

R. D. GRAINGER, Esq. lecturer on physiology at St. Thomas's Hospital, London, has been delivering a most important and valuable lecture "On the causes of insalubrity in towns, and on the means of their removal," in the lecture theatre of the Athenæum, Manchester. The lecture, which was given under the sanction of the Metropolitan Health of Towns' Association, and to which the admission was free, was illustrated by a number of beautiful coloured drawings of the trachea, lungs, heart, and general respiratory system in the human frame; by diagrams of various forms of sewers and drains; by various statistical tables, exhibiting the rates of mortality in different towns, &c.; by drawings of lamps and ventilatory apparatus, and by models of ventilating apparatus including a very simple and cheap ventilating window, applicable to any sitting room or bed-chamber, occupying in fact only the space of a single pane. The three most important tables we subjoin :—

DEATHS BY FEVER.

	In 3 years.	To population annually.
Birmingham	502	1 in 917
Leeds	661	1 in 849
London	9150	1 in 690
Manchester	1507	1 in 498
Liverpool and West Derby	2060	1 in 488
Liverpool parish	1795	1 in 407

Total cases annually:—Liverpool, about 7,000; or one in 25 of the working population.

AVERAGE AGE AT DEATH IN 1840.

Metropolis	26½ years.
Leeds	21 do.
Manchester	20 do.
Bolton	19 do.
Liverpool	17 do.

AVERAGE AGE AT DEATH IN LIVERPOOL.

	From 1784 to 1810.	1841–42.
Gentry	43 years.	43 years.
Tradesmen	23½ do.	19 do.
Operatives	18¼ do.	16 do.
All classes	25 do.	20 do.

Mr. GRAINGER, who was most cordially welcomed as he came forward, then addressed the auditory to the following effect:—Sir and gentlemen, it would not be difficult to prove, were this a fitting occasion, that the large portion of the evils, moral and physical, which afflict the human race, spring from the want of a knowledge, than which there is none more important, of the laws or conditions under which we live. If the mass of our fellow-countrymen could learn to know what a limited number have at length discovered, that every indulgence of angry passion, or debasing appetite, brings in its train insanity, poverty, and affliction, should we see the peace of each domestic circle disturbed by frequent strife, and the broad extent of the land disfigured by that drunkenness which is the besetting vice of our common country? Well will it be for the peace and happiness of mankind, when education, fulfilling the great objects of its mission, shall teach not merely the routine of letters, the technicalities of science, or the conventionalities of society, but those higher lessons—self-management, self-control, and self-knowledge.

In order to assist, in however a humble degree, in this which may be well termed a blessed work of Christian charity, it is my intention to point out some of the more influential causes of the existing insalubrity; to show in what manner they operate upon the human constitution; and especially to state the means, which, according to the best inquiries, are the most efficient to secure the desired amendment. And before entering upon the more immediate question which has brought us together this evening, it is most desirable to premise, what is amply borne out in evidence, that a large part, and that the worst part, of the existing evils is preventible; and that, notwithstanding their extent and appalling aspect, there are happily circumstances in the case which will reduce, in a manner that could hardly be hoped for, the pecuniary outlay attendant upon the various sanitary measures so urgently demanded. With these prefatory remarks I will proceed to consider the various branches of the great and vital question which absorbs so much of the public attention at the present time. And, in the first place, I would observe, that perhaps on no point is the want of knowledge to which I have referred, more to be regretted, than as it concerns the laws which regulate the actions of the human frame. The question of the health of towns is, in its physical bearing, essentially a physiological question, that is to say, in all its branches and in all its phases, although other and most important points are involved, the instigation of noxious agents is bound up with the consideration how and in what way do they affect the bodily organs. The various and important reports, which have within the few last years been submitted to parliament, have shown an example, that of all the causes which are productive of diseases in towns, infinitely the most influential is the *vitiated state of the atmosphere*. Now, upon this subject, the most erroneous conceptions are generally entertained. By those who have even paid some attention to the question, it is even thought that the air of towns is principally deteriorated by the grosser and more palpable contamination arising from smoke. But it is of the first consequence to know that this, although doubtless in itself a great evil, is altogether subordinate as a cause of disease, when contrasted with the subtle, invisible effluvia, which proceed from decomposing animal and vegetable substances; it is this latter class of agents which constitute the potent sources of the diseases, which ravage constantly and unceasingly our manufacturing towns.

It is so essential that this fact should be firmly impressed upon the public mind, that I will claim your attention for a few moments, in order to illustrate the subject of aërial agency in the production of disease. If we turn to what may be called the domestic history of the middle ages, we shall find that the various countries of Europe were periodically, and again and again depopulated by pestilential diseases, which, although variously denominated the plague, the black death, the sweating sickness, and so forth, were in fact only modifications, in the worst form, of that morbid affection termed *fever*. To conceive of the frightful destructiveness of this enemy of the human race, it will suffice to turn to the instructive pages of Professor Hecker's classical treatise on the Epidemics of the Middle Ages. It is there recorded that, by the pestilence, called in the northern kingdoms of Europe *the black death*, and in Italy *the great mortality*, there perished in the brief space of four or five years, in the East, exclusively of China, about 24,000,000 of people; and in the various European nations 25,000,000, or one-fourth part of the then existing population. By the drainage of swamps and marshes; by the felling of forests; by the construction of better dwellings, and of more open cities; by the introduction of sewers, and other less important ameliorations, the western nations have emancipated themselves from such fearful visitants; but the same class of diseases still prevail among us, and according to the startling assertion of Mr. Chadwick, one of the most direful of the number, *typhus*, causes in England and Wales, an annual slaughter exceeding that of the allied armies on the field of Waterloo. What heart, that is not steeled against human sympathy, can contemplate such a battle fought year by year by our own poorer fellow-countrymen, and fought only to be lost, without feelings of the deepest commiseration and sorrow!

Fever, then, is the offspring of the aërial effluvia which result from decomposing animal and especially vegetable matter; and having ascertained this, which is the cardinal point of the whole iniquiry, it will greatly facilitate our consideration of the causes leading to this atmospheric deterioration—(such as imperfect or non-drainage, accumulation of filth and other impurities on the surface, defective ventilation, &c.)—if the manner in which contaminated air acts upon the human body be briefly explained. The solution of this important question involves an acquaintance with the structure and functions of those organs upon which only atmospheric influences *directly* operate, namely the *lungs*, and, in a much less degree, the *skin*. All fevers, except those connected with repletion—typhus, intermitting fevers, ague, &c.—operate by the influence exerted by bad air upon the lungs.—[Mr. Grainger then referred to the coloured drawings of the heart, lungs, trachea, &c. and explained the process of respiration and the course of the venous and arterial blood.]

The lungs, in their totality, are more vascular organs than any other part of the body; in fact, in a given time, *they receive precisely the same amount of blood as the whole of the rest of the system*. At every time that the heart beats, it sends by one of its cavities, the right ventricle, into the lungs two ounces of blood; whilst by another of its cavities, the left ventricle, it drives into the body an equal quantity of the vital fluid. The heart beats, upon an average, about 75 times in a minute, so that in that period of time 150 ounces of blood are propelled into the lungs; in the course of one hour, 562lb; and in 24 hours, 13,488lb, or about 24 hogsheads. Such is the enormous amount of blood circulating incessantly through the pulmonary texture. The quantity of atmospheric air admitted by the windpipe is pro-

portionally large: at each time that we inspire, there enters into the lungs about 20 cubic inches of air, and there being 20 respirations in a minute, 400 cubic inches of air enter in that time, 14 cubic feet per hour, and 366 cubic feet, or 36 hogsheads, per diem.

Now what, it may be asked is the object of this vast amount of liquid and gaseous matter being sent to the lungs? It is essentially to *purify the blood*, by unloading it of carbonic acid. But it is also proper to state, what to non-professional persons is not known, that *the lungs are most important organs of digestion;* that is to say, receiving from the alimentary canal the crude nutritious fluid which has there been elaborated, they, by their action, convert it into pure arterial blood; and, as this is the last of the digestive actions, so, at the same time, it probably is the most essential, and thus the lungs may, even in the alimentary process, be not less important than the stomach itself.

It is, then, upon structures thus highly organized, that from the very first moment of existence to the last act of life, the enormous quantity of air just described is, without the least cessation, acting; a circumstance which is the clue to all that we hear about bad air, want of ventilation, drainage, &c. and sufficient in itself to prove that, compared with the importance of the respiratory process, all the other functions of life, considered in a sanitary point of view, sing into insignificance.

The time will not allow me to dwell longer upon this topic, or it would not be difficult to show, that all the other delicately and highly susceptible structures of the animal frame are, though on a more limited scale, and in a more indirect manner, liable to disturbance by the influence of external noxious agents, impure air, dampness, and filth of every form and description. There is, however, one organ, the skin, to which I shall have occasion to allude, when speaking of the influence of personal habits upon health.

We are now, I trust, in some degree prepared to enter upon the consideration of the various circumstances which act as causes in producing an impure and contaminated atmosphere.

ON THE CAUSES OF INSALUBRITY IN TOWNS.

It is hardly necessary I should state, that in this brief address it is impossible to do more than to notice, in the most rapid manner, the numerous and important questions involved in that subject, the *Health of Towns*, upon which volumes of evidence have been published. For the sake of clearness and convenience, the causes of unhealthiness may be divided into three classes:—

1. *External*, relating to the state of streets, courts, and alleys.
2. *Internal*, concerning the condition of the dwellings of the labouring classes; and also the state of working-rooms, factories, and public institutions.
3. *Personal*, or what has reference to the habits of the people.

External causes of unhealthiness. The most prolific source of disease in towns is certainly defective drainage and sewerage. Where large numbers of human beings are collected together, it is apparent that there must result a vast amount of refuse matter of every description, to which must be added the solid and fluid excretions of the body; the former of which alone, according to the admirable report of Dr. Duncan, amount in Liverpool to between two and three hundred thousand pounds weekly, or nearly six thousand tons annually. In Manchester, according to Dr. Playfair, as much of the excretæ of the town as amounts to 1500 tons weekly are carted away by the Cheshire farmers. And here I would point out what cannot be too much insisted upon as facilitating the introduction of sanatory improvements, that the very matter, which, if left to itself, becomes, as we have seen, the focus of the most fatal diseases, is in itself most valuable as manure; so much so, indeed, that it has been calculated the annual return of potatoes from the above source, in Manchester alone, amounts to 300,000 loads. It will be necessary again to speak of this important point.

As it is certain that the whole question of sanitary improvement hinges upon the provision of a scientific and complete system of drainage, it is desirable to point out the defects and wants which at present require rectification. The commissioners of the health of towns state, as the general result of their inquiries, that "among the evils which appear to operate with the greatest severity on the condition of all, and especially of the labouring classes, are those arising from the absence of a proper attention to drainage. They prevail almost universally, to an extent incompatible with the maintenance of the public health." It is further stated, that "the want of efficient means for the immediate removal of all refuse and excessive moisture, is not only felt with regard to a large proportion of houses, but also prevails extensively in the streets; whilst the densest portions, which contain the poorest population, are in general altogether unprovided with underground drainage." The experience of all who have inquired into this subject, entirely supports these statements. It is impossible to exaggerate the defective state of the drainage generally found in manufacturing towns. In this town, as I have stated, the authorities have, much to their credit, made great efforts to rectify this defect. Large districts, and those the most densely populated, entirely unprovided with these necessary outlets; sewers and drains placed on the surface and constantly emitting pestilential exhalations; sewers even in many of the principal districts in towns so shallow as to be merely adapted to *surface* drainage, leaving the basement stories of houses and cellars where these are used for habitations, as in Liverpool and Manchester, altogether undrained, though in an especial degree requiring it; sewers and drains constructed upon wrong principles as to form, dimensions, and materials; a want of proper traps to prevent the escape of noisome stenches and effluvia; and more than all these defects put together, a totally insufficient supply of water, without which, as Dr. Southwood Smith justly observes, "not only is no good done by a drain, but the very evil intended to be avoided is positively increased and extended."—(Applause).

The necessity of an ample supply of water, which ought to be as freely given as the air we breathe, meets the inquirer in every branch of the question; it matters not what you speak of —of house drains; court drains; street sewerage; of water closets and privies; of wash houses, baths, and personal cleanliness; or of decent habits and comforts of home; to say nothing of whole ranges of warehouses, and the revenue of a principality, annually destroyed by fire in some of our great cities—in all directions and upon all questions you are met with the *want of water*. As a complete and effective system of drainage, like so many other sanitary improvements, demands an ample supply of water, the two subjects may be advantageously considered in connexion.

There are few points upon which, until lately, more erroneous opinions were prevalent than upon that relating to the supply of water. Many persons seem to think that, if the poor could be supplied with a moderate quantity for domestic purposes, the principal object would be attained. This source of demand, although of course the most pressing, is in reality the one which would, under a proper system, cause the smallest consumption; the great demand would be for cleansing out the drains and sewers—for preventing those accumulations on the surface which are now constantly polluting the air we breathe, and for the supply of water closets, by which I mean not only those for the rich and wealthy alone, but for *every inhabitant* of this and the other large towns in the kingdom. The domestic supply must also be increased to an amount of which those who have been in the habit of selling and buying water in pints and gallons have no adequate conception. Well, some will say, how is all this supply to be obtained, and how is it to be paid for. As we shall notice this important point when the remedial means are considered, I will only say here, that the thing *is* feasible—that it can be accomplished—and, moreover, that it would even be, under a wise and comprehensive system of administration, *economical*.

The existing system would appear to indicate an expectation that the sewers and drains are to effect many things which, it is quite certain, they never have and never can accomplish; and amongst the rest, that, by impressing a kind of volition upon the more solid parts of their contents, these latter should obligingly carry themselves off; and, in the case of Liverpool for example, walk into the Mersey, or in that of Manchester into the Irwell. But this is a kind of feat which matter, with its accustomed stubbornness, will not perform, however much desired. On the contrary, all liquids holding solids in solution or mechanical suspension, are so desirous of getting rid of their burthen, that they deposit it whenever and wherever they can. Take, as an instance, any large river which, in its course, runs through a lake, such as the Rhine which passes through the lake of Constance, or the Rhone which encounters, in its exit from Switzerland, the lake of Geneva. What happens? Why, that the great mass of solid matter which those streams bring down from the Alps, as soon as the velocity of the current is retarded by the larger space, begins to sink and to be deposited on the bottom of the lake, a due order, so well known, to the geologist, being observed, according to the size of the particles and decrease of the velocity; so that at first the larger fragments are lodged, and then, in succession, the finer substances, till at length, being thus purged of their impurities, these noble rivers, and especially the Rhone, come forth as clear as the sky, again to pursue their unceasing journey to the ocean. The same law which governs the condition of these and other great streams, applies to every the least rivulet, ditch, and puddle; and of course, unless controlled, to every drain and sewer. Wherever there is any delay in the course of

the filthy waters of towns, there a deposit of offensive and poisonous mud takes place; in every angle and turn—on any the least inequality of surface, an accumulation of solid matter does and must be formed; and as much of this matter is in a state of minute division and moisture, and all of it periodically on the falling of rain, it presents precisely those physical conditions which facilitate its escape into the air in the form of a poisonous vapour. The black mud, it can never be too often repeated, is the one great source of malaria in towns, and of those noxious diseases which are constantly cutting off the people. Wherever you see that black mud, whether in rivers, canals, stagnant pools, or in sewers, remember it is a source of noisome, noxious and poisonous exhalations.

The great law, then, which regulates deposits of matter held in solution, is, that whenever the current is retarded, the solid particles have an increased tendency to subside; or to speak more exactly, the ordinary law of gravitation operates under more favourable circumstances. It becomes a point of consequence to know whether there exist in our public and private drains and sewers, and in the surface of streets, courts, and alleys, any causes which will promote deposits according to the above principle. The answer has already been given in the invaluable reports and evidence of the Health of Towns Commission. By their unnecessary size and defective form, most of the older sewers being flat at the bottom, they cause a retardation in the flow of their muddy contents, and thus of necessity produce a lodgment of putrifying animal and vegetable matter. Another source of deposit is the improper direction of these conduits, the sharp angles and curves of which, especially where the smaller sewers enter the main trunks, lead to obstruction; and to these must be added the various inequalities of surface connected with all masonry, especially when it is originally bad or gets out of order. The construction of house drains is liable to the same remarks, all of them being built of porous materials, much too large for their contents, and ordinarily square, the worst of all forms for such a purpose. [Mr. Grainger then referred to the diagrams of sewers, and intimated that the egg-shaped form, or one perfectly round, in fact, a tube—were the best forms.]

In the case of Manchester, there is superadded to the ordinary defects the immense mischief arising from the damming up by weirs of the several streams—the Irwell, the Medlock, the Irk, and Moston Brook—which, flowing through their respective valleys, are thus converted into so many pestilential cesspools, instead of fulfilling the office they were by nature designed to effect, the surface drainage of the district. It appears from the valuable report of Mr. Binney, and the map appended, that there are no less than twenty of these weirs in the heart of the town. The effect of these obstructions upon the health of the population is probably not sufficiently known, and therefore a few remarks upon this subject may not be misplaced. The general result of these weirs is to allow the less contaminated water at the top to flow onward, but, as by a bank, to stop and retain all those masses of putrid mud, which hang suspended in the sluggish stream whilst it moves, but ready upon the least occasion to sink, and thus to form deposits. I am indebted to Mr. Saunders for this slight map of the town, and the streams through it, and the weirs upon them. I counted twenty of those weirs within the town, and the effect of these weirs is, that they dam up the water, and the very fine mud carried down the stream being obstructed by the dam, sinks to the bottom, and there of course accumulates, and produces those noxous exhalations which are constantly rising to the surface.

Such being the operation of these dams, we may ask what is the character of the matter thus obstructed. Why the very substances—putrifying animal and vegetable remains—which, as medical men well know by experience, and the physiologist by experiment, are poisonous to human life. As Mr. Binney has so graphically described, and as we all may see on looking into these polluted streams, the products of that disgusting looking mud are constantly rising to the surface in bubbles of air, consisting principally of carburetted hydrogen, which diffused and spread about by the wind, carry into all the houses of the town those fatal germs of disease, beneath which so many, even of the higher classes of the community, succumb, without either themselves or their friends suspecting, that all the mischief might be prevented by a more rational mode of procedure.

And here I would remark, what applies to the whole of these noxious causes, that the occurrence of fever, and other diseases obviously and immediately springing from the malaria of these great towns, is only a part of the mischief; sickness in a thousand different forms is also excited—indigestion with all its distressing discomforts; epidemic catarrhal affections, with swelled throats; nay, according to high authority, Monsieur Baudelocque and Sir James Clarke, physician to the queen, even that scourge of our country, scrofula and its innumerable progeny, among which stands pre-eminent pulmonary consumption, is mainly excited by the deteriorated, damp and unwholesome atmosphere breathed in crowded cities and miserable dwellings. Such being the manifold evils of malaria, it is to be hoped that among the sanitary ameliorations effecting in Manchester, the great evil of the weirs, whose effects we have briefly noticed, will not be overlooked.—(Applause).

Another great defect is the state of the pavement, which, instead of consisting of blocks closely laid together, is formed of stones stuck as it were like raisins in a plum pudding, in the ground, thus leaving large spaces, holes, and furrows between, where refuse matter readily accumulates. The evil is of course greater in the case of the gutters, where, if any where, it is a point of primary importance to have an even and an impermeable surface, to convey away the water loaded with all sorts of impurities. The climax, however, is only attained in the unpaved and wretched courts and alleys, many of which I have felt it my duty to visit. Here the whole surface is strewed with filth; and, as this is necessarily placed opposite to the windows and doors of the adjoining dwellings, these receive and convey into the interior an infected air.

The result of all this is, that as regards the sewers and drains, accumulations of a poisonous mud are constantly forming; whilst, as far as the surface is concerned, the stagnant water deposits the same matter, with which, as every one must have seen, all the crevices become filled; and the earth, being thus saturated, is constantly exhaling, but especially after rain, that fatal malaria by which our cities are desolated. The defective arrangements first noticed would, under any circumstances, lead to evil; but, conjoined with the existing limited supply of water, they operate with a tenfold force.

In addition to these deposits, there are other sources of noxious accumulations, and that to an extent, and of a kind, of which the wealthier classes have no conception. * * * In 1841, being engaged in the children's employment commission, I visited, with other places, Nottingham; and there I found whole streets totally unprovided with useable privies; and one of the town surveyors told me, that, on the same day when he gave me his evidence, his men had removed from one drain three cart loads of such abomination. After such accumulations have been permitted to take place in what, by a kind of effort of the imagination, we are expected to consider as the efficient outlets or *cloacæ* of our great cities, one might not perhaps be surprised to hear of any possible or impossible thing finding entrance into these tubular cess-pools. But still, I was not prepared for the statement of one of the London surveyors, that there had been discovered, in an old city sewer, such singular articles as an old bedstead, coffins, and the body of the parish beadle. They actually dug into the sewer, and found it very convenient to inter the bodies therein; and, by a kind of retribution, according to the evidence before the health of towns commission, there was actually found, in this sewer, the body of the parish beadle. No one who has lived in a large town can have avoided making the observation, that the most noisome smells arise from the gratings and gully-holes of sewers; and the gaseous matter producing them, by infecting the air, is one of the many causes of the unhealthiness we are considering. All these points have an immediate bearing upon every house in this town. Dr. Southwood Smith states in evidence, that he has been struck with the number of cases of fever in houses opposite gully holes; that when fever once attacks any one member of a family in such a situation, it commonly attacks several individuals; and that the disease is generally severe, and runs into the typhoid type. I well remember the late Dr. Armstrong, than whom no higher authority can be quoted, mentioning to me a certain house, as I remember in Tottenham Court Road, London, which was directly opposite a sewer-grating, and in which house typhus fever had several times appeared, and, as Dr. Armstrong was satisfied, caused by the disgusting effluvia continually arising from the drain.

And this leads me to call your most serious attention to a circumstance, than which, in the present defective sewerage, nothing can be of more consequence; I allude to the fact of their being contained in every house drain and every street sewer a large quantity of noxious gases, the principal of which, *sulphuretted hydrogen*, is, as we shall soon see, one of the most deadly poisons to animal life. These gases are constantly exhaling through the gratings of the gully holes, but especially in the summer, as you must have noticed by the increase of smell, and still more so whenever any current of water, not sufficient entirely to fill the sewer, passes along the bottom. There is at that time a most unhappy kind of circulation within the drain; for whilst the muddy water is running down on the bottom, a

counter current of sulphuretted hydrogen moves upwards till it finds an escape at the gully hole.

This is sufficient to show how vitally important it is that these pestilential vents should be guarded, and their number reduced as far as possible. But neither of these precautions is taken: the gully holes are open, emitting, as we all know, most noisome smells, instead of being provided with proper traps or valves; and whilst, according to a high authority in this question, Mr. Dyce Guthrie, their number is unnecessarily great. The plan of trapping, it must be recollected, only mitigates the evil, which is inseparable from the present construction of sewers.

Let us pause for an instant, and consider the effects of the noxious condition I have just described. The whole area of a town is continually pouring into the air exhalations, which to breathe in any concentrated form, is disease and death. This malaria is not confined to the *foci* where it is mainly generated, but is carried by the wind to all places and districts—into shops —into the drawing-room of the merchant, and man of fortune—into sleeping apartments—into kitchens, where food is being prepared—into the poor man's only room, where, amongst other evils, the water used by the family imbibes the poisonous exhalations; in fact, no place is free from this penetrating and subtile agent. I is only lately, that a most melancholy illustration of this fact has been furnished in Liverpool and Manchester, by the epidemic which prevailed during the last winter, and especially in the months of November, December, and January. I was surprised more than I can express on arriving in the former town, to hear, from two medical friends, that all their children, and in one, if not both cases, several of their servants, had been attacked by this epidemic—fever, for such it was; that many of the higher classes had fallen victims to it; and that, in fact, a painful feeling of alarm prevailed. My informants resided in what were reputed to be very healthy situations: one at Everton, the other in Mount Pleasant; and there can therefore, be no doubt, that in this, as in similar instances, the focus of the disease was in those densly populated and impure localities, so familiar to those who are acquainted with the town. We occasionally hear in London of some few insolated cases of typhus occurring in the squares and streets of the West End; but I must say, that any thing approaching to what, according to the information I have received, occurred during the last winter in Liverpool and Manchester, is unknown in the metropolis.

The time will not allow me to enter into further details respecting the subject of drainage, and I must therefore proceed to notice another prime cause of disease—the condition, namely, of the privies in this and other large manufacturing towns. And I may, in the outset observe, I feel assured it is impossible that the state of things which in this respect prevails, can be known to the influential, the wealthy, and I may truly say benevolent inhabitants of our great cities. No language can describe, and no imagery can picture forth, the sights which meet the eye on entering the narrow courts, alleys, and passages, in many districts of Manchester, Liverpool, and other towns. The whole surface, in some of these places, is often covered with unnameable abominations; and if any one inspired by the benevolent wish of abolishing these abodes of wretchedness, should seek the cause of such repugnant scenes, he has only to examine the adjoining privies, and all is explained, for a large number of them are totally unfit for the use for which they were designed. It is sometimes affirmed that the poor are the voluntary cause of a large part of this disgusting state of things, and even that they are indifferent to the existence of them. But, after some intercourse with them, and a somewhat extended inquiry, I feel it an act of simple duty to express my conviction, that although some among them may from long habit, and perhaps, from a feeling approaching to despair, lose all care about the ordinary decencies of life: yet that the great proportion of our poorer neighbours, who it ought never to be forgotten bear their evil lot with surprising patience, are perfectly conscious of the evils they endure, and are most anxious for their removal.—(Applause.) I have scarcely ever conversed with the inhabitants of courts and alleys, without hearing them express a deep anxiety to be relieved from the pollution to which, by no choice of their own, they are doomed; and this ought to be known, because many of those who are most anxiously forwarding the great work of improvement, are fearful that after all has been done, the apathy of the poor themselves will, at least during the present generation, be a great obstacle to the introduction of cleanly habits and comfortable homes. I feel perfectly assured on the contrary, that every amelioration will be received with thankfulness, and will be zealously seconded by the great mass of the labouring population.—(Applause.) Mr. Holland took me yesterday to a house by the side of a cess-pool, and one of the rooms of which is actually built over the cess-pool. The poor woman opened the door, which entered out of one of the rooms, which in fact was the back of the privy. That poor woman said it was poisonous; and, when they came down in the morning, it made them sick almost, and she was most urgent to get out of her wretched situation. But she was a widow with six children, and the earnings of the whole family last week, as she said (and Mr. Holland has known her for a year or more), were 6s. She was in debt to her landlord, and had to pay him 2s. 6d. She offered to pay him by instalments, if he would give her another house. But no; he would not give her another, nor let her leave till the last penny was paid. So you see there are other causes besides indifference and apathy in this case.—("Hear, hear," and applause.)

All who have investigated the subject agree, that the state of the privies is a prolific cause of disease. A question has indeed arisen among medical men, whether injurious results really do proceed from the decomposition of animal matter. Without embarrassing you with the *pros* and *cons* upon this point, I may state my own opinion, formed after much reflection, and resting upon many ascertained facts, that *all* organic matter in a state of decomposition, or to speak more intelligibly, of putrefaction, is most pernicious to the human body. Evidence of the direct assaults of animal exhalations is not however wanting. When the yellow fever some years ago desolated Barcelona, the focus of the pestilence was proved to be the vicinity into which the refuse of the city was collected, and especially of the butchers' shambles and slaughter houses. An intelligent physician of Nottingham, Dr. Watts, stated to me in evidence, that in certain houses which were built over or on the side of privies, fever regularly prevailed in spring and autumn; and he added these expressive words, "to this there is no exception." Again, the effluvia arising from privies, cess-pools, &c. abound, as Dr. Duncan has so well explained, in one of the most deadly poisons, *sulphuretted hydrogen*, which is known to the physiologist; so deadly in fact that a dog may be killed by being made to breathe an atmosphere consisting of one part of this gas mixed with 800 parts of common air; whilst a small bird would perish in air containing only 1-1500th part of sulphuretted hydrogen. Human beings have occasionally perished on the instant from accidentally inhaling this gas in a concentrated form; and other persons from breathing these emanations when more diluted have become faint, delirious, and insensible.

Some conception of existing defects as to privies may be gathered from the following extract from the second report (p. 61) of the Health of Towns Commission.—"At Nottingham it is stated that under the most favourable circumstances houses under a rent of £10 have only one privy to four or five houses, and frequently only to eight or nine. (I have already stated that I saw myself whole streets where the privies were in such a condition that not one of them could be used.) In one part of Manchester the wants of upwards of 7,000 inhabitants are supplied by 33 privies only."—(Sensation.) In some districts of the town, Newtown and Irktown, Dr. Playfair reports that "there are very few privies throughout the neighbourhood, three or four streets having no accommodation of that kind whatever."

Even where these conveniences are provided, they are very often of such a miserable kind, and so ill constructed, that they become a nuisance and cause of disease, rather than providing for the wants of the neighbourhood. There being no means provided either to retain or to drain off the liquid excretæ, the ground becomes saturated with a fetid fluid; and if, which not rarely happens, the walls of the surrounding houses are sufficiently near, the same "leprous distilment" finds its way into the dwelling rooms, so that food has become tainted in a single night. The amount of this evil is well described by Mr. Austen, the honorary secretary of the Metropolian Health of Towns Association, who in his capacity of resident engineer of the Blackwall railway, which passed through one of the worst-conditioned districts in London, had ample opportunities of tracing the contamination first noticed. In his evidence, this gentleman states that "the privies were frequently close to the back door; that they were always in a neglected and offensive condition, and frequently running over; that the fœcal matter or the soakage from the cess-pools. had in some cases actually joined from house to house, and had thus formed, in immediate connexion with the houses, and surrounding their foundations, a subsoil in a worse condition than that in dung heaps."

I have myself seen, in Birmingham, privies in manufactories, designed for and used by large numbers of children, in a state which it is impossible to describe, and into which one would even hesitate to turn a dog. * * * These are painful and humbling statements to make in civilised England; but the

cause of decency, morality, and religion, demands, whilst the evils remain uncorrected, a disclosure of facts involving the eternal interests of thousands of the rising generation.

I am warned by time to proceed to the consideration of another of the grand external causes of disease, the want, namely, of a free admission of air into the crowded habitations of the poor. Of all the physical agents which operate upon the human fame, the atmosphere, and for the reasons I have already explained, is infinitely the most important. The indispensable necessity of an ample supply of pure air for the maintenance of a healthy and vigorous population is known, in a general way, to all; but again, it may be remarked, that the full bearing of this subject upon sanitary improvement is only beginning to be understood by the community at large; and it will, therefore, not be superfluous to show how, and in what manner, contracted streets, inclosed courts, and narrow alleys, by impeding a free circulation of air, tend to the generation of disease. If even a perfect system of drainage, general and domestic, and ana bundant supply of water were obtained, there must always be in great cities, unless they attain a degree of purity which, although possible, can hardly in these times be expected, so many local causes of atmospheric deterioration, such as smoke, carbonic acid, &c. that the formation of wide thoroughfares, of open squares, and, above all, of public parks and gardens, will remain an essential desideratum. If such under the best circumstances be demanded, how urgent must be the want of these urban lungs, as they may be called, in the existing state of our great towns! There is one circumstance which bears so immediately upon this subject, that I will claim your attention for a moment to explain it. Those who know the town are aware that, in many districts, there are two long courts, running parallel with each other, and separated by a block of intervening houses. Now, it seems to be the rule that the entrance into these courts is placed in the middle, facing the central block of houses, so that a thorough current of air is totally prevented. This great defect could be remedied; for all that is required is to pull down the two houses of the front street, which bound the present entrance, by which a direct passage would be secured to each court, whilst the ground belonging to the existing entrance might be built upon, and the pecuniary loss so far diminished.

I have, from the vast importance of the question, dwelt so long upon some of the more influential of the external sources of insalubrity, that I can only rapidly allude to those internal causes, such as defective ventilation of houses, dampness, overcrowding, which are as potential in the generation of disease within as the others are without. The exact knowledge of the physiologist, the experience of the physician, and the records of the registrar, all establish as a fact indisputable, that wherever any number of human beings are accumulated together, unless due and ample means be provided for the constant change and renovation of the air, a poisonous atmosphere is generated, consisting of carbonic acid, the product of respiration, of the secretions from the skin, of the gaseous matters arising from the decomposition of food, and of the noxious exhalations from the earth and defective drains, if these latter chance to be provided. One of the highest authorities in Europe, Dr. Arnott, states as the result of his experience, that the immediate and chief cause of many of the diseases which impair the bodily and mental health of the people, and bring a considerable portion prematurely to the grave, is the poison of *atmospheric impurity* arising from the causes explained, as existing in and around their dwellings. All this becomes clear to the comprehension when you recollect the enormous activity and demands of the lungs. If, as we have proved to be the case, 336 cubic feet of pure air is required for every individual in 24 hours, what can be anticipated but the most fatal results, when as many as twelve or fourteen human beings are penned up, as we learn from Dr. Duncan is not unfrequently the case, in a room of ten or twelve feet square; or when, in one filthy court with an area of 150 square yards, 118 inhabitants (equal to the population of many villages) are huddled together. The effluvia in many of these crowded apartments are overpowering to those unused to them, and impregnate the clothes of a visitor, as Dr. S. Smith states, with a disgusting odour.

A most intelligent observer, Mr. Samuel Holme, mentions a fact relating to those pestiferous sinks of physical and moral debasement, common lodging-houses, which entirely corresponds with the information I obtained officially a few years since, on the same subject. Surely, while the benevolent think it a duty and a pleasure to relieve the wants and ailments of the poor, it is therefore a subject deserving the highest consideration, how they can preserve from fever, and consumption, and scrofula, the lives of their fellow creatures, by the improvements here suggested.

Manchester Guardian.

DR. LYON PLAYFAIR AND THE FARMERS.

Two years ago, Dr. Playfair delivered a course of lectures before the Royal Agricultural Society. It was the first occasion on which the recent discoveries of Liebig, in the physiology of assimilation and nutrition, and the cause of animal heat, were made matter of oral and applied information to the agriculturist. Well do we remember the whispered exclamation of a knot of shrewd and intelligent farmers, just behind us in the lecture-room, on hearing their own hard-earned facts brought home to them, face to face, from a source as new as it was undreamt of. A man, who on awaking in the morning should find a mushroom sprung up on his floor, would not stare at it with more inexplicable amazement than they did on the almost beardless professor who stood before them. The scene was worthy of all commemoration. On the one hand were the stout yeoman of England, fresh from the practical labours of every description of soil. The pastures of Northampton and Leicester, the chalky downs of Buckingham and Kent, the new and the old red sandstone of Warwickshire and Hereford, the clays of Oxfordshire, and the shaly hills of Gloucestershire Cotswold, and a dozen other different soils had there each their sturdy representative. On the other hand, supported and surrounded by a band of Nature's own, as well as of society's aristocracy, stood the young and learned chemist—the student of a master-science—modestly conscious of the possession of knowledge which required but enunciation to be valued, application to be proved. "What in the wide world *can* he tell us about fatting beasts?" was the unfeigned expression of many an incredulous face, the burthen of many a side-whisper. "It would be presumptuous," said the lecturer, "in any scientific man, however exalted his rank in science, to endeavour to instruct an assemblage such as this, or to recommend alterations in the practice of an art, which he has learnt in the closet and not in the field. But it may be permitted, even to the most humble cultivator of science, to examine the practice which you yourselves have perfected, and to point out the laws of nature upon which that practice depends." And as the youthful philosopher proceeded to lay bare, in the clearest and most intelligible language, the recent discoveries in physiology, which he had himself the proud task of translating into our own language, the look of distrust and the smile of incredulity vanished: the vital and obvious interest of the subject at once arrested every eye and every tongue. If there was a heart there—and many there were—that beat with enthusiasm in the cause of science, that was indeed a moment of pure and disinterested gratification. From sources as unexpected as they were beyond suspicion for genuinely scientific fidelity, he announced and explained their own most treasured maxims of economical and successful "feeding," deduced and eliminated as the natural and necessary results of ascertained chemical causes. True it was, that many of the important results there advertised, were well known to many present as matter of the most advanced and skilful practice of the farm-yard. But why was it, that the more conscious they were of the practical truth of his deductions, the more the hearers were riveted, and the lecturer applauded? Because he showed them, with the fact which they did know, the why and the wherefore which they did *not* know: because he exhibited as a patent and apparent result tangible to reason and to argument, that which was before wrapped in the mystery of a mere arbitrary and isolated *fact;* thereby opening a vista of future application of the same principles to analogous cases. Then first it was heard stated, as a sure and incontestible result of chemical principles, that warmth and shelter form a quantitative equivalent for a certain and measurable portion of food; and why? for a reason as simple as it is beautiful; that the bodily heat of animals is the result of combustion—not metaphorical but actual, proceeding in the lungs without intermission during life, and derived from its universal cause, the union of oxygen with carbon; the former obtained from the atmosphere by the act of breathing; the latter supplied by the food through the organs of digestion to the blood, and brought into contact with the atmospheric air in the lungs; that by a manifest consequence, the greater the amount of food consumed *as fuel* for the defence of the animal against external cold, the greater the resulting demand upon the provender, for the purposes of nutrition.—*Agricultural Gazette.*

ST. MARY'S PRIORY.

A TALE FOR THE TIMES.

CHAPTER XII.

CONCLUSION.

"Think ye the spires that glow so bright
In front of yonder setting sun,
Stand by their own unshaken might?
No—where the th' upholding grace is won
We dare not ask, nor Heaven would tell,
But sure from many a hidden dell,
From many a rural nook unthought of there
Rises for that proud world, the saints' prevailing prayer."

The Christian Year.

On the banks of the little river Mee stands the ancient and picturesque town of Meeford, St. Mary's. It is now little more than a very large village, though the old market-place with its ruined cross, still assembles a few buyers and sellers in it every week. The most striking object in the town is the beautiful church of St. Mary's, built by the monks of a great Cistercian abbey, once lords of the soil for many miles round. The rectory house was built out of the ruins of the abbey, as well as a grammar-school, and a hospital for twelve poor men and as many poor women. A curse seemed to have fallen on these institutions, which though they had a show of charity, were founded out of the spoils of oppression and robbery. The grammar-school had had no pupils on the foundation for many years. The master received a few gentlemen's sons into his well-furnished house, and the dilapidated school-room was used for a wood store. The chapel, in which the founder of the hospital required his alms folk to assemble daily, was in ruins, and the gentleman who had the title of "Warden," with the income belonging to it, lived at a great distance, and never thought of troubling himself about the goings on of his "brethren." The rector of the parish was a well meaning man. He visited the sick, built a school-room, and gave away a good deal of money. His wife and daughters visited the school, kept up a clothing club, and were very popular among the poor. But they had no notion of being recluses, and the rector being well connected, and keeping a close carriage, society of course had claims upon him. Six miles from Meeford stood another town, a place of some trade, with a rapidly increasing population. There were several Catholic families there, but no chapel. Mass was said there on Sundays only, in a hired room, by a Priest from a Mission at some distance. At Meeford there were two or three Catholic families, some members of which went to the neighbouring town to hear Mass. But the distance was a serious obstacle, the children were neglected, and the priest who officiated at Q—— was uneasy at being unable to do any thing for them. About two miles out of Meeford stood a house called the Priory. It had been an offshoot from the great abbey, and had shared the fate of the parent house at the dissolution. Its new possessors received the usual reward of sacrilege.* The property changed hands again and again, and was at the present time deeply mortgaged, the house shut up, and its owner in great difficulties. It was advertised for sale and immediately purchased by Mr. Trevelyan, and given by him to Mrs. Raymond, who laid it at the feet of the Bishop, she having just entered a convent as a postulant. * * *

A few years have passed away; St. Mary's Priory is founded, and the reader is about to behold Mrs. Raymond and Ethel wearing the holy habit of religion, and changed into Sister Jane Frances, and Sister Mary Gertrude. It was the Feast of the Assumption. Everything both within the house and out of doors, wore an air of festivity. A joyful day it was to the whole community; but there were two hearts under that holy roof, which trembled at the excess of joy they felt, lest it should arise from a mixture of earthly feeling. That day was to witness the clothing of three postulants, who were Teresa Mowbray, Clara Merton, and Adelaide Harding. The two who felt afraid of their own joy, were Adelaide's sister, and Clara's cousin. The sun was shining gloriously, the bright blue sky was decked with light fleecy clouds, and the trees were standing in that rich, massive, luxuriance of summer foliage, which is peculiar to an English landscape. The garden was still gay with flowers, in spite of the unsparing hand with which they had been gathered for the decoration of the chapel and cloister. Birds, and beasts, and every living thing, seemed rejoicing in the sunshine. One might have fancied that the angels had decked nature in her lovliest and richest array on that day in honour of the triumph of their Heavenly Queen. The quiet domain of the Benedictines towards the afternoon, became the scene of unwonted animation. The noise of horses and carriages, the sound of men's voices, the tread of a crowd of poor people, was heard at the gates of St. Mary's Priory. The church was a public one; but the choir was enclosed by a rood screen, in such a manner that the nuns could hardly be seen from the nave, though their voices could be heard distinctly. At two o'clock, the convent bell was heard summoning all to the church, and vespers began. The postulants, clothed in snowy muslin, wearing on their heads bridal veils, and crowned with white roses, sat just within the sanctuary. At the Magnificat they rose, and kneeling before the bishop, demanded the holy habit, and permission to serve God in that house. Then came the reception at the end of the cloister. Teresa Mowbray had all the privileges of her glorious birthright. Her devout father gave her up joyfully to her divine spouse. Clara Merton and Adelaide Harding were saddened by the recollection that those to whom they owed their birth, would not consent to be

It must not be forgotten, that in the hope of winning back the nobles and gentry of England to the true faith, and to prove that the Church is not greedy of wealth, a dispensation was granted in queen Mary's reign to all holders of church lands who acknowledged the Pope's authority.—(See Lingard.)*

present at their heavenly espousals. All the sisters bearing tapers, received the three brides at the end of the cloister. The prioress gave them each a crucifix and addressed them in a very touching exhortation as they knelt before her. The whole procession then moved solemnly back to the chapel, and the bishop addressed the postultants in a beautiful discourse, which they listened to with the most profound reverence. After this came a very touching part of the ceremony. The postulants go out to take off their worldly attire, and return in a loose flowing black gown, and their hair dishevelled like Magdalens. They kneel in their places till the time for the clothing arrives, then they prostrate themselves before the superior in token of the unqualified obedience they vow. After that, the clothing was put on by the Reverend Mother and the assistant sisters, the veil placed on their heads by the bishop, and the novices led into the choir. Whilst "Ecce quam bonum" was chanted, the novices received the reverence and kiss of peace from each sister after kneeling down before her, and ended by taking the stalls appointed for them, when the whole choir burst forth with the glorious "Te Deum laudamus." Ah, who can tell what those feelings were which dwelled within the pure hearts of that little band of holy maids. All that is noblest and purest and most holy in a regenerate soul, must have found a place there. If disinterested affection, even when it springs from mere human feeling (such as may be found among heathens) be beautiful to look upon, what shall we say of Christian charity, boundless as the ocean, and fervent and enduring as it is boundless! When one contemplates the love of souls manifested by a St. Paul, a St. Francis Xavier, a St. Teresa, a St. Alfonso, one is lost in wonder at the graces it is our Lord's pleasure to bestow upon His elect. And even those who are not saints, but weak mortals, beset with infirmities which they cannot subdue, though they sigh after perfection, and are resolved to aim at nothing short of it, even such as these are capable of feeling a thirst for the salvation of souls, and of making heavy sacrifices to benefit those for whom they have no mere human affection. We need only point to the sons and daughters of St. Vincent de Paul in jails and abodes of vice—to the sisters of "the Good Shepherd," who devote themselves to reclaiming female penitents—to show what the love of God can do, even in imperfect creatures. The love of God! it is a wonderful thing to contemplate; nor can ordinary mortals form any idea of what it is, unless they study the lives and writings of the saints. It is said that we grow like what we gaze upon. The experience of some of us will prove that it is not always so, but still that may be the secret of the perfection which the cloister enables so many to obtain. The examples of the saints is so constantly impressed upon religious; the language of the saints is ever in their ears; the actions of the saints ever before their eyes; the songs and prayers of the saints ever on their lips. Our progress in any science greatly depends upon the attainments of our teacher. Now the love of God is the science of the saints. Is it not rational, and in accordance with analogy and experience to lay down as an axiom, that our progress in spiritual life, greatly depends on our taking the saints for our guides?

Of the characters whom we have brought before the reader, as called first from heresy and schism into the bosom of the One True Church, and afterwards to the glorious lot of a heavenly marriage, we can now say no more. A veil is drawn over them from this moment. They are dead to the world, consecrated and set apart for the service of the sanctuary; and we, who are doomed to wander in the dreary deserts of "a barren and dry land where no water is," can only look at them as we look upon the altar through its screen, with reverence and awe, as being what God has chosen for himself, and made holy. Yes, they no longer belong to us. They are a chosen generation; "virgins who follow the Lamb whithersoever he goeth:" Spouses of the great King of heaven! May all who are truly called to this wonderful and blessed state, be faithful to the call, and walk worthy of it. May they shine as lights to the rest of the faithful, and may they, by their intercession, obtain for many who are now in danger of being wrecked on the shores of this stormy world, the same blessings that they have received themselves in their call to the holy state of religion.

Salve Regina, mater misericordiæ!
Vita, dulcedo, et spes nostra, salve!
Ad te clamamus, exules filii Evæ,
Ad te suspiramus, gementes et flentes, in hac
Lacrymarum valle.—
Eia ergo, advocata nostra!
Illos tuos misericordes oculos ad nos converte.
Et Jesum, benedictum fructum ventris tui, nobis
Post hoc exilium ostende. O clemens, o pia,
O dulcis Virgo Maria!

Feast of St. Mary Maddelena de Pazzi, A.D. 1845.

If you desire to labour with fruit for the conversion of souls, it behoves you to mix the balsam of gentleness with the strong wine of your zeal, to the end that the latter be not too ardent, but benign, pacific, long suffering, and full of compassion. For the natural character of men is of such a temperament, that when treated with harshness, it becomes still more hardened, whereas mildness soon softens it. Moreover, we ought to remember that Jesus Christ came to bless men of good will, and if we give up our good will to his guidance, we may be sure that he will render it not unfruitful.—St. Francis of Sales.

There is nothing that so much edifies our neighbour, as an affectionate benignity of demeanour; by means of which, as a lamp keeps burning by the oil, is maintained the flame of good example.—S. Francis of Sales.

Saint Vincent of Paul, even in preaching, was wont to speak with great sweetness and gentleness, so much so that he caused in the minds of his hearers, particularly those of the poorer sort, such great confidence, and such a ready desire to embrace his advice, that often after preaching he found them crwoding round him, and, with tears in their eyes, entreating him to receive their confessions, in which they disclosed, with the utmost frankness, the most hidden recesses of their souls, and their various spiritual maladies, in order to obtain from him a remedy.

DEATH.

The grave, the grave! Why shrinks our frame
Appalled and startled at that name?
Untrodden path to good or ill,
Death, why shouldst thou my bosom chill,
Since, one day, linked in close embrace,
We *must* encounter, face to face?
Come, let me view thee, as thou art,
Ere raised thine arm, ere poised thy dart;
Before my limbs beneath thee bow
Come, let me commune with thee now;
Survey thee ere thou claim'st command,
And clutch thee with a living hand.

But not as thou assail'st the bad,
With vengeance armed, with terrors clad;
Conscience in front, and in thy train
Fiends sterner than disease or pain;
Remorse, upon the closing eye
To picture forms of guilt gone by;
Anguish, to summon from within
Fierce gusts of unrepented sin;
Despair, with phrenzied accents crying,
"Death opes the gate of never dying!"
Come not with these. They mingled not
With Adam's curse, our general lot;
Another tyrant's pomp they swell,
Not ministers of death, but hell.

I do not bid thee leave behind
One evil common to my kind:
Come, with that haggard-visaged band
Which by the sick man's pallet stand.
The sinking pulse, the failing sense,
Slow pangs or hastier violence,
The feverish couch, by suffering strewed,
The sleepless pillow, tear bedewed,
The dizzy brain, whose wanderings seem
Of worlds beyond our sight to dream,
As if in eagerness to run
To our new being, ere begun;
Each fiery proof of sharp assay
Which wrings the spirit from its clay,
All griefs to which our flesh is heir
May wait on thee, yet peace be there.

Peace, hand in hand with thee, hath stood
By burning pyre, or field of blood:
Slackened the fury of the flame
Which racked th' unyielding martyr's frame;
Or with the hero's latest sigh
Mixed echoing shouts of victory;
Th' unjust award, the dungeon's gloom,
The grim parade of public doom,
The lifted axe, the gazing throng,
And, keener far, their country's wrong,
Fall powerless on the good and brave,
Terrors, not triumphs, of the grave!

Nerved by fair hope of honour's meed,
The martyr, hero, patriot, bleed;
With beacon light above their urns
Renown's unchanging loadstar burns;
Fame o'er their busts her pennon waves,
And Glory sentinels their graves.

But for th' obscure—the many—those
Who sink in unobserved repose,
(Not more observed the prince than hind
By the supreme, eternal mind;
In the tomb's equalizing cell
Alike the named and nameless dwell;)
What aids us in the spirit's strife
On the last edge of doubtful life?
Disarms the foe when most he rages,
Palsies his might, his stroke assuages?
Swallows the grave in victory?
And shows how great our gain to die?

Is it some lesson taught by sense?
The sophist's test, experience?
Or Reason, who of each thing well,
But her own subtle self, can tell?
Scant is the balm such stores supply
To soothe our mortal agony;
Weak the foundations these can lay
To bear us when the world gives way.
The truths *they* blazon, all we *know*
Proclaims the tomb one blank of woe.
We *know* its tenants cease to share
Light, motion, warmth, yon sun, this air;
Sever'd from man, unseen, unseeing,
Disjoined from every tie of being;
Silent and still, dark, cold, alone,
The worm their mate, their couch the stone;
All that was flesh, by slow decay,
Mouldering to nothingness away.
So frowns the mighty victor's brow!
Death, thus I commune with thee now!

Substance of hope! at that dread hour
When death asserts his fullest power;
When the brief joys which earth has lent
Pass from us like a shepherd's tent;
On thee our care-worn spirits lean,
Bright evidence of things unseen!
No torch we seek, we need no sun,
God hath his reign of light begun;
Faith points the way to promised lands,
Dwellings more sure than made with hands;
Abiding cities, like a bride
Adorned to grace her husband's side;
Rivers, whose founts can never dry;
Life, in which death alone shall die!

One day as St. Macarius was walking with his disciple in Nitria, the latter went on some little distance before him, and having met a heathen priest, who was running with a heavy piece of wood upon his back, accosted him: "Where art thou going, thou devil!" but the idolator took the log and gave him so severe a beating with it, as to leave him almost for dead; and then placing it on his shoulders again, went on his way running. St Macarius a little after meeting him, saluted him thus: "May God preserve you, poor labourer."—"You have done well," replied he, "to salute me in a friendly manner." Upon which the saint rejoined: "I saw you fatigued, and yet running hastily, and so I saluted you, in order that you might stop and rest yourself awhile." Upon which the heathen priest answered: "From this I know that you are a servant of God;" and then casting him at his feet, he declared he would never leave him, until he had received him into the number of his spiritual children.

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